REMARKS

Claims 1-21 are pending in this application. Claims 1-21 are rejected. Claims 1, 12 and 20 have been amended. No new matter has been added. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1-21 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Doty (U.S. Patent 5,929,639). Applicants respectfully traverse this rejection.

Doty describes an RF coil, and more particularly, an x-quadrupolar coil 230 formed from a series of figure-8 coils 231, 232 to produce a magnetic field that is quadrupolar when viewed along the x axis. Alternatively, a parallel pair of figure-8 coils may be used (column 6, lines 8-11). The optimum subtended angle in the four Golay loops is typically 130-140 degrees for the x-quadrupolar coil. Optimum overall length is typically about 5% to 40% greater than the window height h of the aligned observe coil 210, depending largely on the type and dimensions of the aligned observe coil. Optimum axial spacing between central arcs 233, 234 is typically half the coil radius (column 6, lines 11-18).

Claim 1, as amended, recites a coil arrangement for a medical imaging system comprising "a plurality of twisted portions in combination with the plurality of coil elements, and wherein a twisted portion is provided generally centered between each adjacent coil element of the plurality of coil elements." Doty fails to describe or suggest such a coil arrangement.

In contrast to the coil arrangement recited in claim 1, as amended, the coil of Doty provides a combination of figure-8 coils having a cross-over portion between elements of each figure-8 coil and a cross-over portion along one edge of a coil element of one figure-8 coil connected to the adjacent figure-8 coil. This cross-over portion is formed at the edge of the coil element. The coil arrangement of claim 1 recites wherein a twisted portion is provided generally centered between each adjacent coil element. Doty fails to describe or suggest any such symmetry and in fact teaches away from such an arrangement. The coil array of Doty is configured in a curved arrangement wherein figure-8 coils are provided on

opposite sides of an array with a straight coil portion connecting the two figure-8 coils. Accordingly, Doty does not describe or suggest a coil arrangement as recited in claim 1.

Claims 2-11 depend from independent claim 1. When the recitations of claims 2-11 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 2-11 are likewise patentable over Doty for at least the same reasons set forth above.

Claim 12, as amended, recites a coil array for a medical imaging system comprising "a second coil array portion having a multi-lobe saddle train, the multi-lobe saddle train comprising a plurality of twisted portions and wherein a twisted portion is provided between each adjacent lobe of the multi-lobe saddle train, the twisted portion located a distance from each of an edge of adjacent lobes." Doty fails to describe or suggest such a coil array.

In contrast to the coil array recited in claim 12, as amended, the coil of Doty provides adjacent figure-8 coils connected with a cross-over portion located at an edge of one of the figure-8 coils and not located a distanced from the edge. Adjacent figure-8 coils are then connected via a straight coil portion. Accordingly, Doty does not describe or suggest a coil array as recited in claim 12.

Claims 13-19 depend from independent claim 12. When the recitations of claims 13-19 are considered in combination with the recitations of claim 12, Applicants submit that dependent claims 13-19 are likewise patentable over Doty for at least the same reasons set forth above.

Claim 20, as amended, recites a method for providing coil arrays for a medical imaging system comprising "providing a twisted portion generally centered between each adjacent coil element of the plurality of coil elements." Doty fails to describe or suggest such a method.

In contrast to claim 20, as amended, and as described in more detail with respect to claim 1 above, a twisted portion is not shown, nor described or suggested, generally centered

between each adjacent coil element of the plurality of coil elements in Doty. Accordingly, Doty fails to describe or suggest the method recited in claim 20.

Claim 21 depends from independent claim 20. When the recitations of claim 21 are considered in combination with the recitations of claim 20, Applicants submit that dependent claim 21 is likewise patentable over Doty for at least the same reasons set forth above.

Thus, for at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. § 102(b) rejection of claims 1-21 be withdrawn.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention and all of the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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